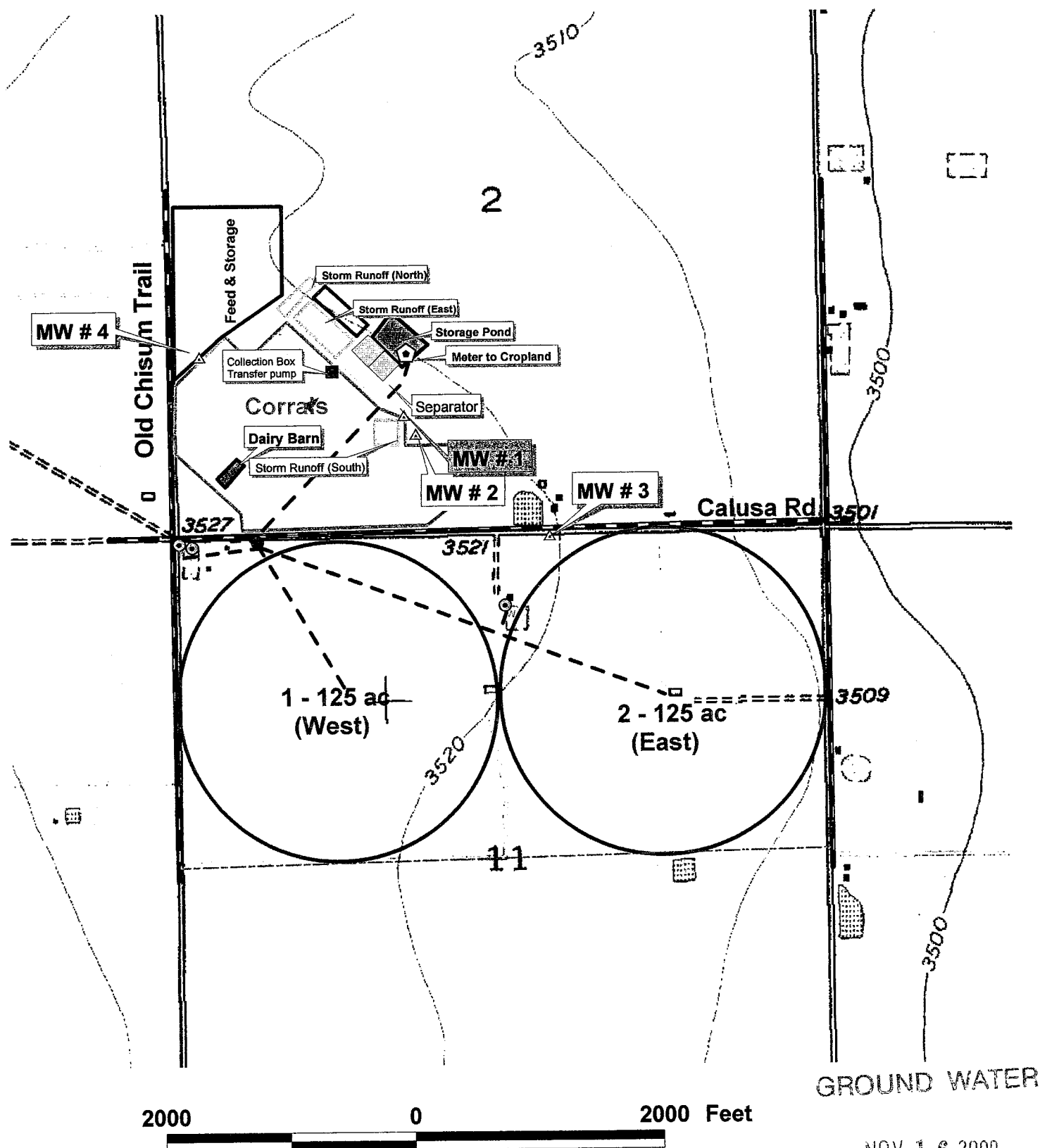
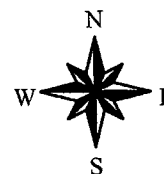


# Cheyenne II Dairy



NOV 16 2009

BUREAU

**B-5. Plans and Specifications.** For new facilities and for new components of existing systems, attach plans and specifications certified by a New Mexico registered professional engineer. [Section 20.6.2.1202 NMAC]

☒ Not applicable because no new facilities are proposed.

☐ Plans and specifications are attached.

☐ Plans and specifications were previously submitted. Submittal date(s): \_\_\_\_\_

**B-6. Description of Components.** Provide descriptive details of all components of your processing, treatment, storage and/or disposal system. Include all components listed under Item A-8 in Part A.

Component	Description (construction material, liner type, irrigation method, capacity, dimensions, area, etc.)
Holding tank	Concrete – 3200 gallons
Separator	Stainless steel - 500 gpm
Storage lagoon	Vinyl lined – 27.1 ac. ft. w/2'fb
Settling ponds (2)	Vinyl lined – 12.4 ac. ft. w/2'fb
Land Application Area	Irrigated cropland – 252 acres
Storm runoff ponds (3)	Earthen - 47.8 acre ft

**B-7. Operational Plan.** Attach a detailed description of how you operate your processing, treatment, storage and/or disposal system.

Animal feeding operations: include stormwater management, nutrient management plans, method for mixing irrigation and wastewater.

Domestic wastewater treatment facilities: include pre-treatment, solids management, vegetation management for land application.

Facilities using reclaimed domestic wastewater above ground: include proposed water quality classification(s), effluent monitoring, setbacks, irrigation schedules, etc. that will result in protection of public health and the environment. Please refer to *NMED Ground Water Quality Bureau Guidance: Above-Ground Use of Reclaimed Domestic Wastewater* for further information. A copy of the guidance document is available on the NMED website [www.nmenv.state.nm.us](http://www.nmenv.state.nm.us) under "Ground Water Quality".

☐ Operational plan is attached.

☐ Operational plan was previously submitted. Submittal date(s): \_\_\_\_\_

**B-8. System Maintenance.** Attach a description of the operations and maintenance procedures which ensure that your processing, treatment and disposal system functions properly; e.g., inspections, pumping schedules, equipment maintenance, etc.

☒ O & M procedures are attached.

☐ O & M procedures were previously submitted. Submittal date(s): \_\_\_\_\_

**Hall Environmental Analysis Laboratory, Inc.**

Date: 29-Sep-09

**CLIENT:** Atkins Engineering Associates**Client Sample ID:** Cheyenne II M/W-2**Lab Order:** 0909313**Collection Date:** 9/16/2009 12:48:00 PM**Project:** Cheyenne Dairy**Date Received:** 9/17/2009**Lab ID:** 0909313-08**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0</b>						Analyst: LJB
Chloride	230	2.0		mg/L	20	9/22/2009 12:12:39 AM
Nitrogen, Nitrate (As N)	18	1.0		mg/L	10	9/18/2009 1:51:11 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: MMS
Total Dissolved Solids	2230	200		mg/L	1	9/22/2009 3:02:00 PM
<b>SM 4500 NORG C: TKN</b>						Analyst: LJB
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	9/21/2009 10:00:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 8 of 13

**Hall Environmental Analysis Laboratory, Inc.**

Date: 29-Sep-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0909313  
**Project:** Cheyenne Dairy  
**Lab ID:** 0909313-09

**Client Sample ID:** Cheyenne II M/W-3  
**Collection Date:** 9/16/2009 12:20:00 PM  
**Date Received:** 9/17/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0</b>						
						Analyst: LJB
Chloride	160	2.0		mg/L	20	9/22/2009 12:30:04 AM
Nitrogen, Nitrate (As N)	9.0	0.10		mg/L	1	9/18/2009 2:08:37 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
						Analyst: MMS
Total Dissolved Solids	2240	200		mg/L	1	9/22/2009 3:02:00 PM
<b>SM 4500 NORG C: TKN</b>						
						Analyst: LJB
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	9/21/2009 10:00:00 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 9 of 13

# Hall Environmental Analysis Laboratory, Inc.

Date: 29-Sep-09

CLIENT: Atkins Engineering Associates  
Lab Order: 0909377  
Project: Cheyenne Dairy  
Lab ID: 0909377-03

Client Sample ID: Cheyenne II MW4  
Collection Date: 9/17/2009 8:05:00 AM  
Date Received: 9/18/2009  
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Analyst: TAF						
EPA METHOD 300.0						9/18/2009 8:10:17 PM
Chloride	200	2.0		mg/L	20	9/18/2009 7:52:52 PM
Nitrogen, Nitrate (As N)	5.4	0.10		mg/L	1	
Analyst: MMS						
SM2540C MOD: TOTAL DISSOLVED SOLIDS						9/24/2009 3:16:00 PM
Total Dissolved Solids	1680	200		mg/L	1	
Analyst: LJB						
SM 4500 NORG C: TKN						9/24/2009 2:40:00 PM
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 3 of 4

**Hall Environmental Analysis Laboratory, Inc.**

Date: 30-Jun-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0906124  
**Project:** Cheyenne Dairy  
**Lab ID:** 0906124-16

**Client Sample ID:** MW-2 Cheyenne II  
**Collection Date:** 6/4/2009 1:54:00 PM  
**Date Received:** 6/5/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	220	2.0		mg/L	20	6/6/2009 7:43:29 AM
Nitrogen, Nitrate (As N)	19	1.0		mg/L	10	6/6/2009 7:26:04 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: SNV
Total Dissolved Solids	2100	200		mg/L	1	6/7/2009
<b>SM 4500 NORG C: TKN</b>						Analyst: KMS
Nitrogen, Kjeldahl, Total	ND	10		mg/L	1	6/10/2009

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 16 of 18

**Hall Environmental Analysis Laboratory, Inc.**

Date: 30-Jun-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0906124  
**Project:** Cheyenne Dairy  
**Lab ID:** 0906124-17

**Client Sample ID:** MW-3 Cheyenne II  
**Collection Date:** 6/4/2009 12:27:00 PM  
**Date Received:** 6/5/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: RAGS
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	150	1.0		mg/L	10	6/6/2009 5:59:00 AM
Nitrogen, Nitrate (As N)	6.5	0.10		mg/L	1	6/6/2009 5:41:35 AM
						Analyst: SNV
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	2300	200		mg/L	1	6/7/2009
						Analyst: KMS
<b>SM 4500 NORG C: TKN</b>						
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	6/10/2009

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 17 of 18

**Hall Environmental Analysis Laboratory, Inc.**

Date: 30-Jun-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0906124  
**Project:** Cheyenne Dairy  
**Lab ID:** 0906124-18

**Client Sample ID:** MW-4 Cheyenne II  
**Collection Date:** 6/4/2009 12:41:00 PM  
**Date Received:** 6/5/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	200	2.0		mg/L	20	6/6/2009 5:24:10 AM
Nitrogen, Nitrate (As N)	4.6	0.10		mg/L	1	6/6/2009 5:08:45 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: SNV
Total Dissolved Solids	1700	200		mg/L	1	6/7/2009
<b>SM 4500 NORG C: TKN</b>						Analyst: KMS
Nitrogen, Kjeldahl, Total	ND	10		mg/L	1	6/10/2009

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 18 of 18



**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Apr-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0903305  
**Project:** Cheyenne Dairy  
**Lab ID:** 0903305-13

**Client Sample ID:** M/W 2/Cheyenne II  
**Collection Date:** 3/18/2009 2:33:00 PM  
**Date Received:** 3/20/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: RAGS
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	230	1.0		mg/L	10	3/28/2009 11:33:14 PM
Nitrate (As N)+Nitrite (As N)	21	1.0		mg/L	5	3/28/2009 11:50:38 PM
						Analyst: DMG
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	1800	400		mg/L	1	3/26/2009
						Analyst: TAF
<b>SM 4500 NORG C: TKN</b>						
Nitrogen, Kjeldahl, Total	ND	2.0		mg/L	1	3/22/2009

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 13 of 17

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Apr-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0903305  
**Project:** Cheyenne Dairy  
**Lab ID:** 0903305-14

**Client Sample ID:** M/W 3/Cheyenne II  
**Collection Date:** 3/18/2009 3:05:00 PM  
**Date Received:** 3/20/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	180	1.0		mg/L	10	3/29/2009 12:08:03 AM
Nitrate (As N)+Nitrite (As N)	7.6	1.0		mg/L	5	3/29/2009 12:25:27 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: DMG
Total Dissolved Solids	2100	200		mg/L	1	3/26/2009
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	3/22/2009

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 14 of 17

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Apr-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0903305  
**Project:** Cheyenne Dairy  
**Lab ID:** 0903305-01

**Client Sample ID:** Cheyenne II M/W 4  
**Collection Date:** 3/18/2009 1:47:00 PM  
**Date Received:** 3/20/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	200	1.0		mg/L	10	3/28/2009 1:08:21 PM
Nitrate (As N)+Nitrite (As N)	5.5	1.0		mg/L	5	3/28/2009 1:25:45 PM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: DMG
Total Dissolved Solids	1500	100		mg/L	1	3/28/2009
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	1.7	1.0		mg/L	1	3/22/2009

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 17

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Jan-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0812399  
**Project:** Cheyenne Dairy  
**Lab ID:** 0812399-09

**Client Sample ID:** MW-2 Cheyenne II  
**Collection Date:** 12/17/2008 2:44:00 PM  
**Date Received:** 12/19/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	230	1.0		mg/L	10	12/19/2008 2:24:10 PM
Nitrogen, Nitrate (As N)	20	0.10		mg/L	1	12/19/2008 1:49:21 PM
<b>SM 2540C: TDS</b>						Analyst: TAF
Total Dissolved Solids	2200	400		mg/L	1	12/22/2008
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	12/30/2008

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 9 of 10

# Hall Environmental Analysis Laboratory, Inc.

Date: 07-Jan-09

CLIENT: Atkins Engineering Associates  
Lab Order: 0812399  
Project: Cheyenne Dairy  
Lab ID: 0812399-10

Client Sample ID: MW-4 Cheyenne II  
Collection Date: 12/17/2008 12:49:00 PM  
Date Received: 12/19/2008  
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Analyst: RAGS						
EPA METHOD 300.0: ANIONS						12/19/2008 3:51:12 PM
Chloride	210	1.0		mg/L	10	
Nitrogen, Nitrate (As N)	4.8	0.10		mg/L	1	12/19/2008 10:55:17 AM
Analyst: TAF						
SM 2540C: TDS						12/22/2008
Total Dissolved Solids	1800	200		mg/L	1	
Analyst: TAF						
SM 4500 NORG C: TKN						12/30/2008
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	

Qualifiers: \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 10 of 10

**Hall Environmental Analysis Laboratory, Inc.**

Date: 13-Jan-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0812368  
**Project:** Cheyenne Dairy  
**Lab ID:** 0812368-21

**Client Sample ID:** MW-3 Cheyenne II  
**Collection Date:** 12/16/2008 3:21:00 PM  
**Date Received:** 12/18/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: TAF
Chloride	190	1.0		mg/L	10	12/19/2008 5:13:48 AM
Nitrogen, Nitrate (As N)	8.3	0.10		mg/L	1	12/18/2008 11:49:10 AM
<b>SM 2540 C: TOTAL DISSOLVED SOLIDS</b>						Analyst: KMS
Total Dissolved Solids	2400	200		mg/L	1	12/19/2008
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	1/4/2009

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 21 of 37

**Hall Environmental Analysis Laboratory, Inc.**

Date: 14-Oct-08

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0809462  
**Project:** Cheyenne Dairy  
**Lab ID:** 0809462-01

**Client Sample ID:** MW-1 (Cheyenne II)  
**Collection Date:** 9/23/2008 3:53:00 PM  
**Date Received:** 9/24/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	89	1.0		mg/L	10	Analyst: SLB 9/24/2008 8:36:48 PM
Nitrogen, Nitrate (As N)	6.7	1.0		mg/L	10	9/24/2008 8:36:48 PM
<b>SM 2540C TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	1600	400		mg/L	1	Analyst: KMS 9/26/2008
<b>SM 4500 NORG C: TKN</b>						
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	Analyst: TAF 10/1/2008

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.**

Date: 09-Apr-08

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0803212  
**Project:** Cheyenne Dairy  
**Lab ID:** 0803212-10

**Client Sample ID:** Cheyenne II MW-1  
**Collection Date:** 3/19/2008 4:45:00 PM  
**Date Received:** 3/21/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SLB
Chloride	76	1.0		mg/L	10	3/21/2008 3:33:49 PM
Nitrogen, Nitrate (As N)	4.7	0.10		mg/L	1	3/21/2008 3:16:25 PM
<b>SM 2540C: TDS</b>						Analyst: TAF
Total Dissolved Solids	1100	400		mg/L	1	3/26/2008
<b>SM4500-NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	4/8/2008

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 10 of 18



**Hall Environmental Analysis Laboratory, Inc.**

Date: 18-Dec-07

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0712074  
**Project:** Cheyenne Dairy  
**Lab ID:** 0712074-11

**Client Sample ID:** Cheyenne II MW-1  
**Collection Date:** 12/5/2007 3:00:00 PM  
**Date Received:** 12/6/2007  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SMP
Chloride	73	1.0		mg/L	10	12/11/2007 11:37:44 AM
Nitrogen, Nitrate (As N)	3.7	0.10		mg/L	1	12/7/2007 1:45:06 PM
<b>SM 2540C: TDS</b>						Analyst: TAF
Total Dissolved Solids	780	400		mg/L	1	12/11/2007
<b>SM4500-NORG C: TKN</b>						Analyst: KS
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	12/13/2007

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 11 of 18

**Hall Environmental Analysis Laboratory, Inc.**

Date: 09-Jul-07

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0706339  
**Project:** Cheyenne Dairy  
**Lab ID:** 0706339-11

**Client Sample ID:** MW-1 Cheyenne II  
**Collection Date:** 6/21/2007 9:04:00 AM  
**Date Received:** 6/22/2007  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	61	0.50		mg/L	5	Analyst: CMS 7/3/2007 8:23:33 PM
Nitrogen, Nitrate (As N)	2.2	0.10		mg/L	1	6/22/2007 7:29:25 PM
<b>EPA METHOD 160.1: TDS</b>						
Total Dissolved Solids	2000	400		mg/L	1	Analyst: TAF 6/27/2007
<b>EPA METHOD 351.3: TKN</b>						
Nitrogen, Kjeldahl, Total	ND	5.0		mg/L	1	Analyst: SLB 7/5/2007

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 11 of 18

**Hall Environmental Analysis Laboratory, Inc.**

Date: 29-Sep-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0909313  
**Project:** Cheyenne Dairy  
**Lab ID:** 0909313-13

**Client Sample ID:** Cheyenne II Lagoon  
**Collection Date:** 9/16/2009 12:54:00 PM  
**Date Received:** 9/17/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: LJB
<b>EPA METHOD 300.0</b>						
Chloride	470	5.0		mg/L	50	9/22/2009 1:22:17 AM
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	9/18/2009 4:45:17 AM
						Analyst: MMS
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	4540	200		mg/L	1	9/22/2009 3:02:00 PM
						Analyst: LJB
<b>SM 4500 NORG C: TKN</b>						
Nitrogen, Kjeldahl, Total	470	20		mg/L	1	9/24/2009 2:40:00 PM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 13 of 13

**Hall Environmental Analysis Laboratory, Inc.**

Date: 30-Jun-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0906124  
**Project:** Cheyenne Dairy  
**Lab ID:** 0906124-02

**Client Sample ID:** Cheyenne II Lagoon  
**Collection Date:** 6/4/2009 10:15:00 AM  
**Date Received:** 6/5/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	420	5.0		mg/L	50	6/6/2009 4:49:21 AM
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	6/6/2009 4:31:56 AM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: SNV
Total Dissolved Solids	4100	400		mg/L	1	6/6/2009
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	410	10		mg/L	1	6/9/2009

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Estimated value  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

Page 2 of 18

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Apr-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0903305  
**Project:** Cheyenne Dairy  
**Lab ID:** 0903305-06

**Client Sample ID:** Cheyenne II Lagoon  
**Collection Date:** 3/18/2009 2:02:00 PM  
**Date Received:** 3/20/2009  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: RAGS
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	410	2.0		mg/L	20	4/2/2009 8:07:59 AM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	4/2/2009 11:45:26 AM
						Analyst: DMG
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						
Total Dissolved Solids	4000	400		mg/L	1	3/26/2009
						Analyst: TAF
<b>SM 4500 NORG C: TKN</b>						
Nitrogen, Kjeldahl, Total	510	10		mg/L	1	3/22/2009

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 6 of 17

**Hall Environmental Analysis Laboratory, Inc.**

Date: 13-Jan-09

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0812368  
**Project:** Cheyenne Dairy  
**Lab ID:** 0812368-02

**Client Sample ID:** Cheyenne II Lagoon  
**Collection Date:** 12/16/2008 9:20:00 AM  
**Date Received:** 12/18/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: RAGS
Chloride	380	2.0		mg/L	20	12/30/2008 9:49:58 PM
Nitrate (As N)+Nitrite (As N)	ND	1.0		mg/L	5	12/29/2008 6:13:29 PM
<b>SM 2540 C: TOTAL DISSOLVED SOLIDS</b>						Analyst: KMS
Total Dissolved Solids	5600	2000		mg/L	1	12/18/2008
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	540	10		mg/L	1	1/3/2009

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 37

**Hall Environmental Analysis Laboratory, Inc.**

Date: 14-Oct-08

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0809462  
**Project:** Cheyenne Dairy  
**Lab ID:** 0809462-05

**Client Sample ID:** Lagoon (Cheyenne II)  
**Collection Date:** 9/23/2008 12:28:00 PM  
**Date Received:** 9/24/2008  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SLB
Chloride	360	2.0		mg/L	20	9/24/2008 11:13:30 PM
Nitrogen, Nitrate (As N)	ND	2.0		mg/L	20	9/24/2008 11:13:30 PM
<b>SM 2540C TOTAL DISSOLVED SOLIDS</b>						Analyst: KMS
Total Dissolved Solids	4000	400		mg/L	1	9/30/2008
<b>SM 4500 NORG C: TKN</b>						Analyst: TAF
Nitrogen, Kjeldahl, Total	330	10		mg/L	1	10/4/2008

**Qualifiers:** \* Value exceeds Maximum Contaminant Level  
E Value above quantitation range  
J Analyte detected below quantitation limits  
ND Not Detected at the Reporting Limit  
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank  
H Holding times for preparation or analysis exceeded  
MCL Maximum Contaminant Level  
RL Reporting Limit

lowest TKN





# Hall Environmental Analysis Laboratory

Date: 06-Jan-03

CLIENT: Atkins Engineering Associates  
Lab Order: 0212149  
Project: Cheyenne Dairy #2  
Lab ID: 0212149-03

Client Sample ID: MW-3  
Collection Date: 12/26/2002 11:45:00 AM  
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: HVA
Chloride	140	1.0		mg/L	10	12/31/2002
* Nitrogen, Nitrate (As N)	29	1.0		mg/L	10	12/31/2002
EPA METHOD 160.1: TDS						Analyst: MAP
Total Dissolved Solids	3100	1.0		mg/L	1	1/2/2003
EPA METHOD 351.3: TKN						Analyst: MAP
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	12/31/2002

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range

Page 3 of 5

*Highest NO<sub>3</sub>-N  
not sure what its monitoring  
pecan orchard?*

**Hall Environmental Analysis Laboratory, Inc.**

Date: 18-Dec-07

**CLIENT:** Atkins Engineering Associates  
**Lab Order:** 0712074  
**Project:** Cheyenne Dairy  
**Lab ID:** 0712074-15

**Client Sample ID:** Cheyenne II Lagoon  
**Collection Date:** 12/5/2007 2:50:00 PM  
**Date Received:** 12/6/2007  
**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						
Chloride	550	2.0		mg/L	20	Analyst: SMP 12/7/2007 1:10:17 PM
Nitrogen, Nitrate (As N)	ND	2.0		mg/L	20	12/7/2007 1:10:17 PM
<b>SM 2540C: TDS</b>						
Total Dissolved Solids	5400	2000		mg/L	1	Analyst: TAF 12/11/2007
<b>SM4500-NORG C: TKN</b>						
* Nitrogen, Kjeldahl, Total	990	20		mg/L	1	Analyst: KS 12/13/2007

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 15 of 18

mg/L TKN



# Advanced Analysis, Inc.



5601 19th Street Lubbock, Texas 79407 P.O. Box 16652 Lubbock, Texas 79490

Tel: (806) 796-2805 Fax : (806) 796-2825

ANALYTICAL RESULTS FOR  
COWBELL TESTING  
ATTN: AMY MUNSON  
P. O. BOX 310  
HAGERMAN, NM 88232  
PHONE: (505) 752-0939

RECEIVED  
AUG 30 2005

Receiving Date: 07/25/05  
Reporting Date: 08/06/05  
Project Number: NOT GIVEN  
Project Name: CHEYENNE DAIRY 2  
Project Location: DEXTER, NM

Sampling Date: 07/22/05  
Sample Type: WELL H<sub>2</sub>O, WASTE H<sub>2</sub>O  
Sample Condition: COOL & INTACT  
Sample Received By: MR  
Analyzed By: RG, CW

LAB NUMBER	SAMPLE ID	TDS (mg/L)	Chlorides (mg/L)	TKN (mg/L)	NO <sub>3</sub> -NO <sub>2</sub> -N (mg/L)
Date Analysis Batch Started:		07/26/05	08/01/05	08/01/05	08/04/05
Time Analysis Batch Started:		9:35	10:00	12:00	10:00
AJ9373-1	MW 1	1115	50	< 0.2 *	2.2
AJ9373-2	MW 2	1720	125	< 0.2 *	22.5
AJ9373-3	MW 3	2520	130	0.3	16.3
AJ9373-4	MW 4	1575	210	< 0.2 *	0.37
AJ9373-5	LAGOON	6400	630	560	0.10
Date Analysis Batch Finished:		07/27/05	08/01/05	08/01/05	08/04/05
Time Analysis Batch Finished:		13:00	14:30	17:00	12:30
Blank		< 1	< 1	< 0.2	< 0.01
Quality Control		996	50	5.28	0.329
True Value QC		1000	50	5.00	0.300
% Instrument Accuracy		100	100	106	110
% Extraction Accuracy		N/A	102	102	108
Relative Percent Difference		0	2	3	2

DP-797

MW-2

↳ Highest NO<sub>3</sub>-N Reported

↳ Source: Stormwater Impoundment

MW-4

↳ Upgradient Well

Comment

↳ Re-enter Data  
Based on MW-2

METHODS: EPA 600/4-79-020, 160.1 4500B-Cl<sup>-</sup> 351.4 353.3

\*Less than the Minimum Detection Limit.

Mario Rodriguez, Director.

Date

08-06-05

# Cheyenne II Dairy

